



# 1C. Managing access: The local landscape

09:00 AM - 10:30 AM



Access

# POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

ANNUAL  
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**2024**

27-28 NOVEMBER 2024

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Baden-Württemberg  
Ministry of Transport



# UVAR evolution in Rome and the UPPER project

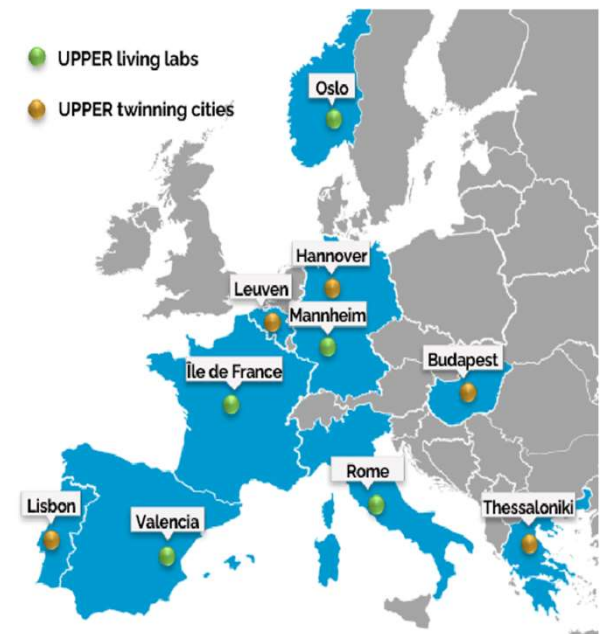
09:00 AM - 10:30 AM

27 November 2024

Chiara Di Majo Rome Mobility Agency (RSM)

# Rome - TEN-T urban Node and «Mission City»

The UPPER project - **UNLEASHING THE POTENTIAL OF PT IN EUROPE** - looking to push people out of private cars and to pull them closer to public transport - leading the transition towards a future of zero-emission mobility.





## Rome approach in the UPPER Project

### The measures



**PULL**ing people towards TPL and sustainable modes:

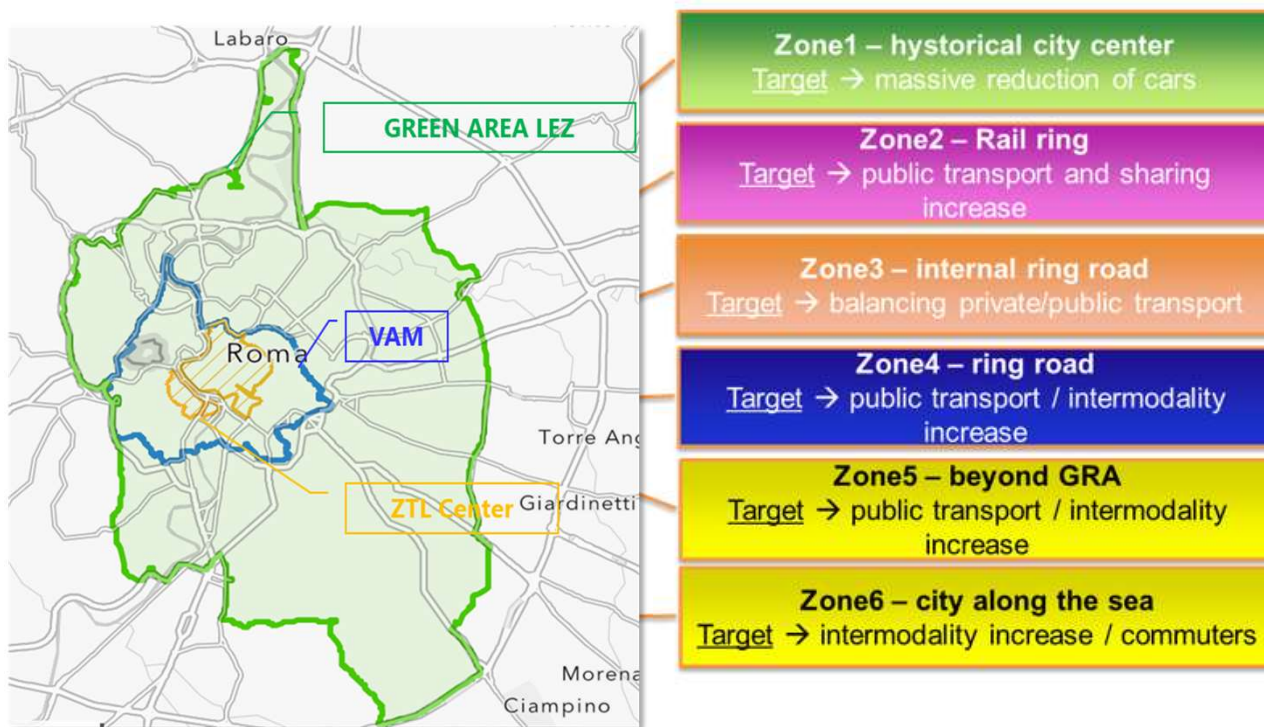
- New MRT lines, new depots
- Renewal of PT fleet
- Multimodal hubs
- MaaS, network management and planning with real time data
- Urban space redistribution (cycling, environmental islands, etc.)
- Incentives and LPT/sharing integration

**PUSH**ing people away from the private vehicle:

- Limited Traffic Zones
- Congestion Charge
- Low Emission Zone (Green Area)

# Urban Vehicle Access Restrictions Policies

**City zoning:** 6 areas with increasing constraints to private mobility, supported by ITS measures.



# Rome in the past century



*Nostalgia di Roma Mia (1971-1980)*



*VIA DELLA CONSOLAZIONE (1980)*

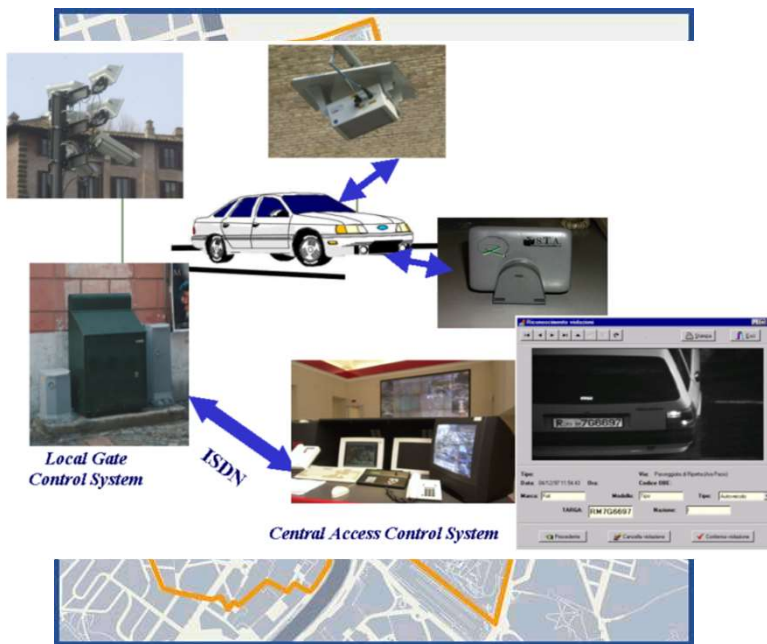




# Trigger # 1 – Hystorical and cultural heritage preservation

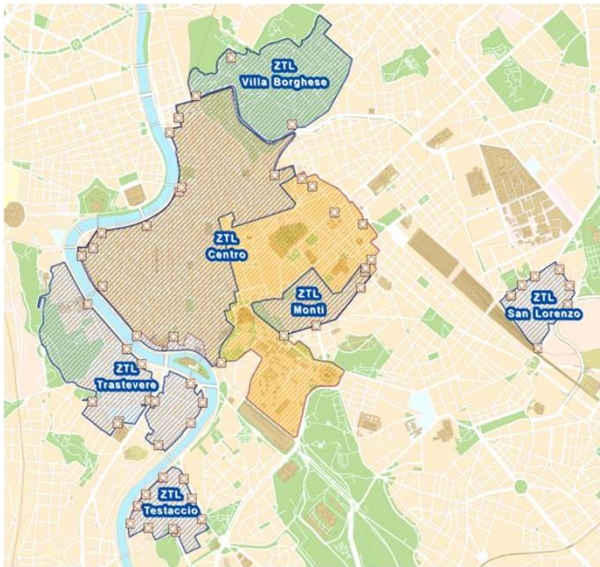
## Year 2000 (Jubilee)

- TMC implementation
- Centralised Automatic Access Control with ANPR, shared with Local Police
- Hourly based access





## Trigger #2 managing «nightlife congestion» 2006-2007



### **LTZ Historic Center**

Mon. to Fri. 6.30 am - 6 pm  
Sat. 2 pm – 6 pm  
Fri. & Sat. 11 pm – 3 am

### **LTZ Villa Borghese**

Mon. to Sun. 0 –24

### **LTZ San Lorenzo**

From Wed. to Sat.  
9.30 pm – 3 am  
(May to July & September  
October)  
Fri. & Sat. 9,30pm–3am  
(November – April)

### **LTZ Testaccio**

Fri. & Sat. 9,30pm–3am

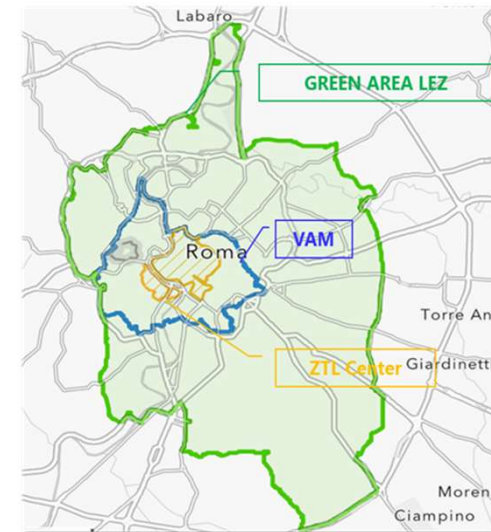
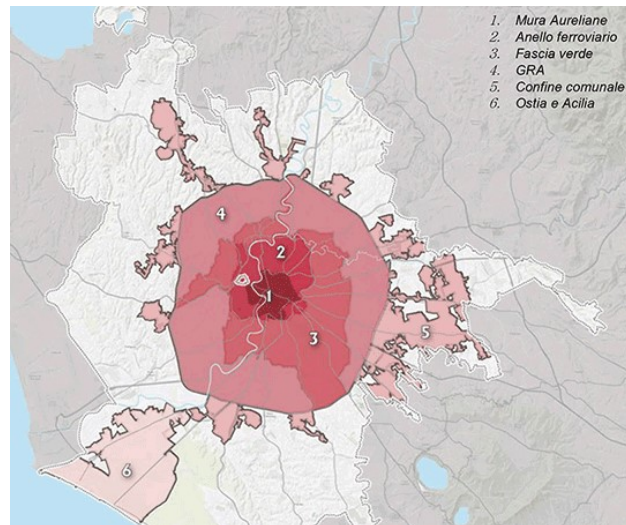
### **LTZ Trastevere**

Mon. to Fri. 6.30–10 am  
Fri. & Sat. 9,30pm–3am

## Trigger #3 Environment and Public Health– 2010's

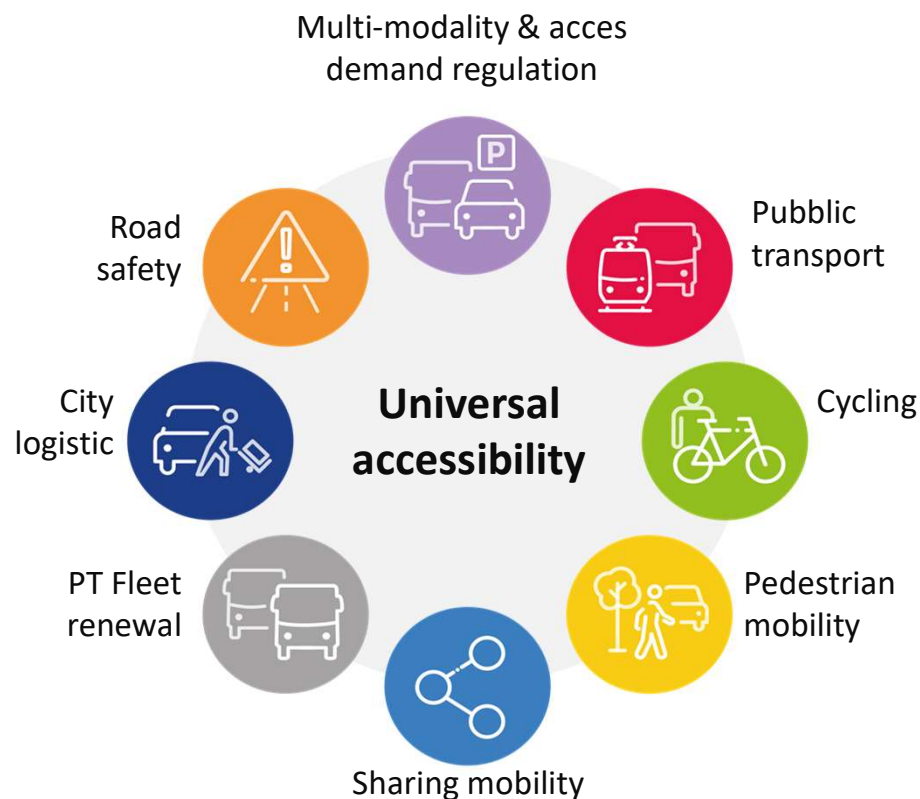
Infringement procedures of 2014 and 2015 for exceeding the concentration limits of the pollutants of PM10, NO2 after 2010

2015 update of the Traffic Masterplan (PGTU) to rate the sensitivity of the areas.



# Mobility contributing to the environmental targets SUMP (2017-2022)

1. Enforcing Public Transport
2. Steering multi-modality
3. **Enforcing UVAR policies**
4. Digitalisation and ITS
5. Rethinking urban spaces focusing on soft mobility (cycling, walking, sharing etc)

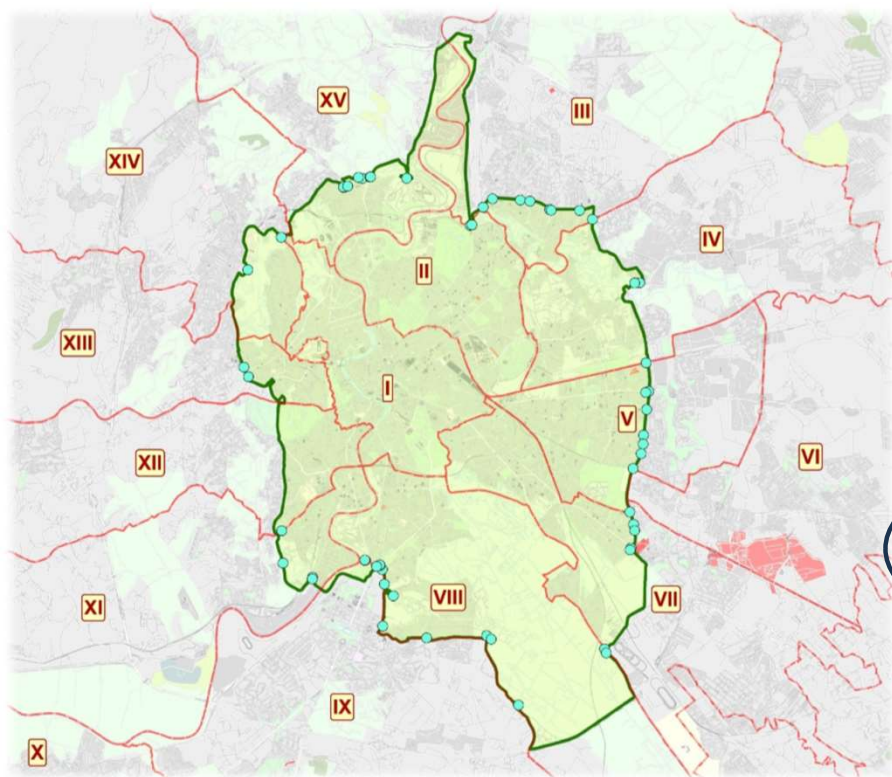


# Multi-stakeholder competence group





# Access Restriction Policies: Green Area the initial plan



Surface: 156 kmq – 45 % of the area inside the G.R.A.

Accesses: 154 e-gates (80 paths)

## PERMANENT RESTRICTIONS AND PROHIBITIONS

from 15 November 2022

Pre-Euro1, Euro1 and Euro2 petrol- and diesel-powered vehicles, **Euro 3** diesel-powered motor vehicles, mopeds and motorbikes powered by petrol Pre-Euro1 and Euro1 and diesel Pre-Euro1, Euro1 and Euro2.

from 1 November 2024:

in addition to the categories mentioned above: motor vehicles fuelled by **Euro3 petrol**.

## SCHEDULED RESTRICTIONS AND PROHIBITIONS (from 1 November to 31 March each year, excluding Sundays):

from 1 November 2024

- **Euro4** diesel-powered cars in the 7.30-20.30 time slot;
- **Euro4** diesel-fueled N1, N2 and N3 commercial vehicles in the 7.30-10.30/16.30-20.30 time slot;
- mopeds and motorbikes powered by Euro3 diesel fuel.

from 1 November 2025,

in addition to the categories mentioned in the previous point

- **Euro5** diesel-powered cars in the 7.30-20.30 time slot;
- **Euro5** diesel-fuelled commercial vehicles N1, N2 and N3 in the 7.30-10.30/16.30-20.30 time slot.

# Green Area LEZ – Challenge – the social impacts

## Ztl fascia verde, gli alleati di Gualtieri contro il sindaco e sulle posizioni di Salvini

Una trentina tra assessori e consiglieri regionali, capitolini e municipali chiede al sindaco di revisionare il provvedimento che "sta generando forti tensioni sociali"



## Ztl fascia verde: sabotato uno dei nuovi varchi elettronici

I vandali hanno imbrattato la telecamere con vernice rossa e scritte ingiuriose



## Ztl Fascia verde, Gualtieri cede: al vaglio "possibili rimodulazioni delle misure"

Dopo l'ondata di proteste scatenate dall'installazione dei varchi e le prese di posizione dei Municipi, il Campidoglio corre ai ripari: istituito un tavolo tecnico ad hoc



A Roma

## "Vogliamo libertà di circolare". In marcia contro le restrizioni

Da piazza Vittorio a San Giovanni il corteo di coloro che vogliono fermare l'ampliamento della Ztl fascia verde della Capitale. Si raccolgono firme per un referendum

ID: 26/05/2019



## Nuova ZTL Fascia Verde, Roma si ribella "Insostenibile per tante famiglie"

Già raccolte oltre 25mila firme online sulla petizione lanciata per fermare i delle vecchie auto inquinanti benzina e Diesel



## Action to overcome the challenge

Monitoring **Traffic flows in LEZ**: use of some installed electronic gate to monitor the traffic flows (February 2024).

**Nord:**

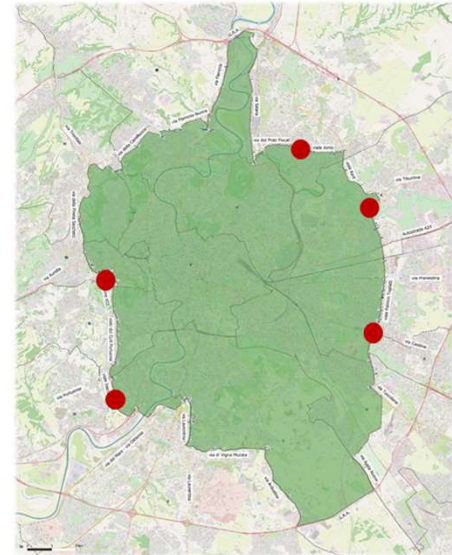
- 613 - Via Pantelleria - Viale Jonio (piste dx e sx)

**Est:**

- 562 - Via Casilina - Via P. Togliatti
- 594 - Via F. Cicogna - Via Tiburtina

**Ovest:**

- 526 - Vicolo di Papa Leone - Via Alberese
- 501 - Via Aurelia - Circ.ne Aurelia (piste dx e sx)



Analysis of about 800.000 transits through e-gates.

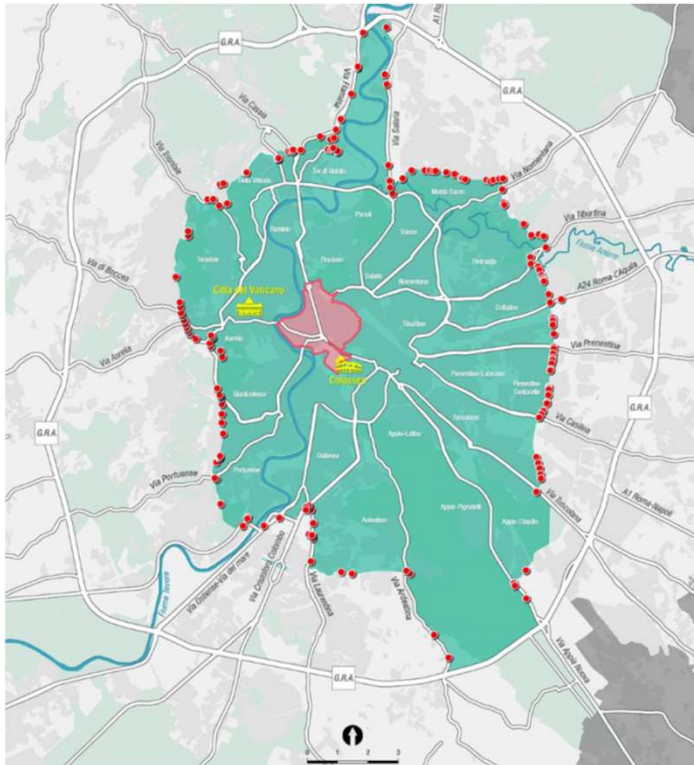
**Decrease of illegal transit from previous 5% (without e-gates) to 2-3% (only after e-gates installation), data stability and more sustainable vehicle fleets.**

## The vehicular fleet circulating before and after the LEZ announcement and the signalling installation

		Parco ACI al 31.12.2022		Previsione 2024		Differenza (2024 vs 2022)	
Auto Bz	E0	134,430	7.6%	117,897	6.8%	-16,533	-12.3%
Auto Bz	E1	25,547	1.4%	21,591	1.3%	-3,956	-15.5%
Auto Bz	E2	66,269	3.7%	50,167	2.9%	-16,102	-24.3%
Auto Bz	E3	67,652	3.8%	53,305	3.1%	-14,346	-21.2%
Auto Bz	E4	204,878	11.6%	169,506	9.8%	-35,371	-17.3%
Auto Bz	E5	127,018	7.2%	112,072	6.5%	-14,946	-11.8%
Auto Bz	E6	275,092	15.5%	301,550	17.5%	26,458	9.6%
<b>Totale Benzina</b>		<b>900,886</b>	<b>50.8%</b>	<b>826,089</b>	<b>47.9%</b>	<b>-74,797</b>	<b>-8.3%</b>
Auto Dsl	E0	23,735	1.3%	20,372	1.2%	-3,363	-14.2%
Auto Dsl	E1	4,197	0.2%	3,525	0.2%	-671	-16.0%
Auto Dsl	E2	15,782	0.9%	13,055	0.8%	-2,727	-17.3%
Auto Dsl	E3	60,896	3.4%	50,365	2.9%	-10,532	-17.3%
Auto Dsl	E4	146,786	8.3%	123,299	7.1%	-23,487	-16.0%
Auto Dsl	E5	134,165	7.6%	117,662	6.8%	-16,503	-12.3%
Auto Dsl	E6	175,754	9.9%	170,024	9.9%	-5,731	-3.3%
<b>Totale Diesel</b>		<b>561,315</b>	<b>31.7%</b>	<b>498,302</b>	<b>28.9%</b>	<b>-63,013</b>	<b>-11.2%</b>
Ibride	All	309,548	17.5%	400,682	23.2%	91,134	29.4%
<b>Totale Auto</b>		<b>1,771,749</b>	<b>100.0%</b>	<b>1,725,073</b>	<b>100.0%</b>	<b>-46,676</b>	<b>-2.6%</b>



# LTZ system – the re-organisation in force



## SCHEDULED RESTRICTIONS AND PROHIBITIONS from 1 November 2024 to 31 October 2025:

from 1 November 2024

- **Euro2, and pre-Euro 2** Gasoline-GPL-Methane powered vehicles h 24
- **Euro3 and pre-Euro3** diesel, fueled N1, N2 and N3 commercial vehicles h 24
- **Euro1 and pre Euro 1** mopeds and motorbikes

### ACCOMPANIED BY:

- Flexibility rules
- Incentives plan calibration
- Enhanced PT services and supply



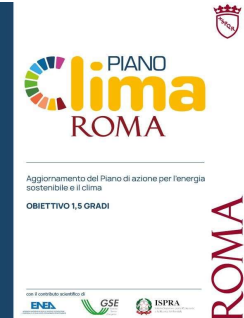
# What's next for the UVAR policies?

 Compliance with the new air quality limits fixes new challenges for urban transport

## Rome Climate Action Plan



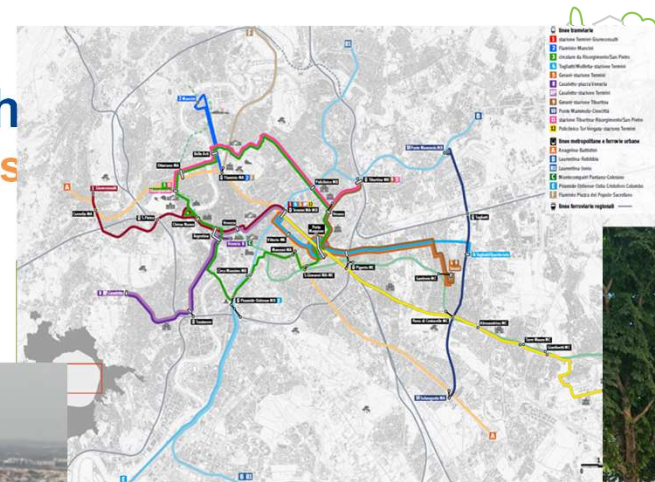
The “Multi-stakeholder Group” preparing to design the Quality Plan.



the future Air







Thank you for  
your attention!





For more information:

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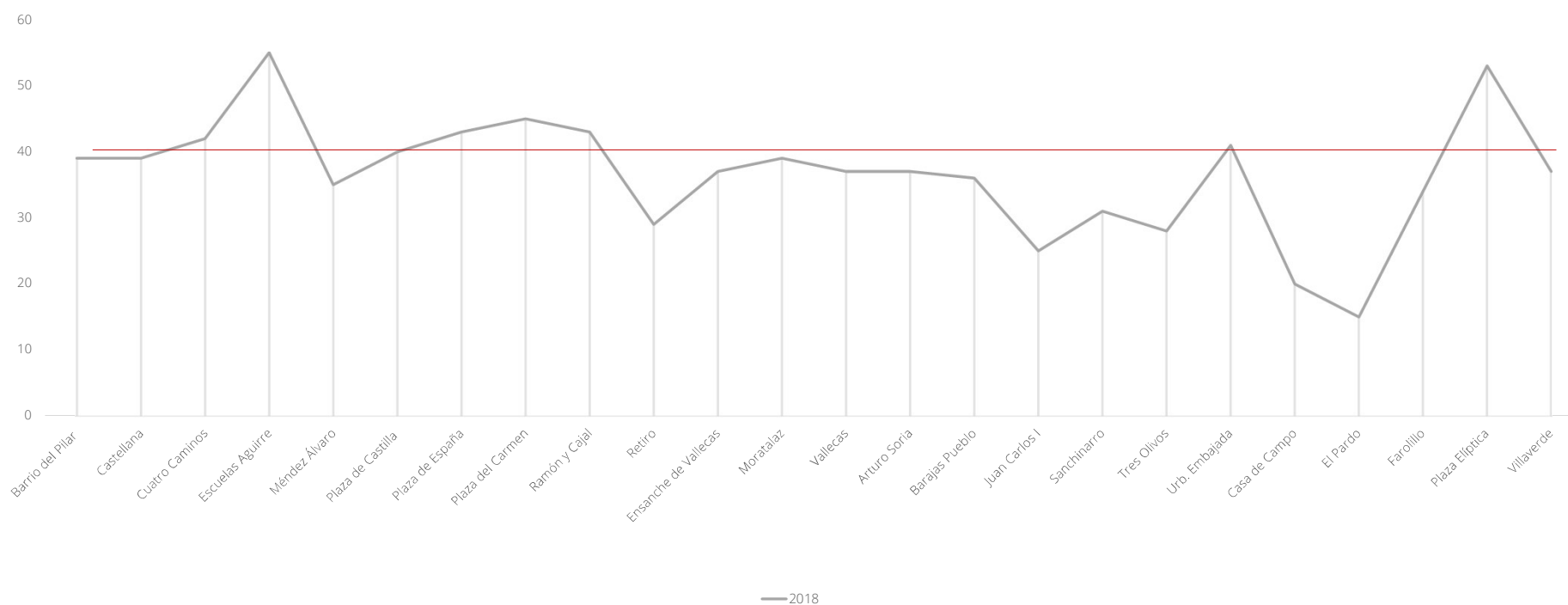
Pedro Fernandez,  
Madrid City Council

# Converting Madrid into a Low Emission Zone enhanced by Zero Emission Zones to foster active mobility in all districts



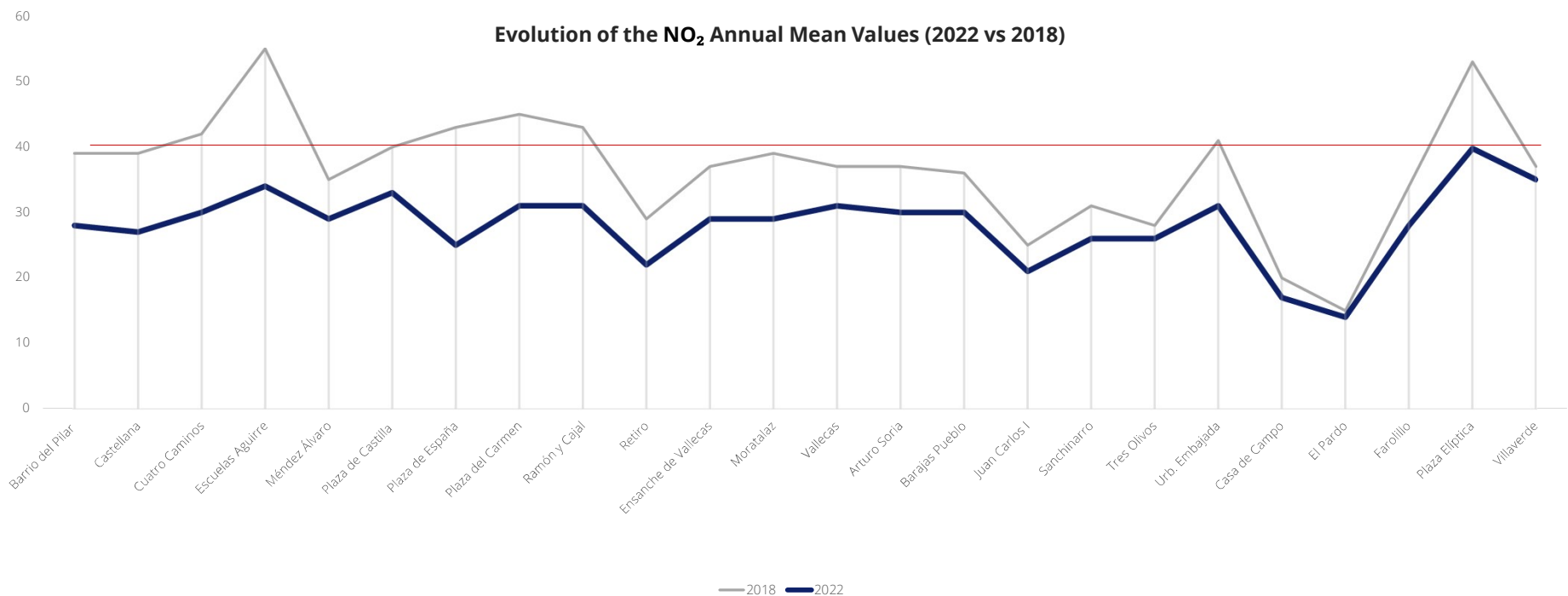
Before...

### NO<sub>2</sub> Annual Mean Values 2018

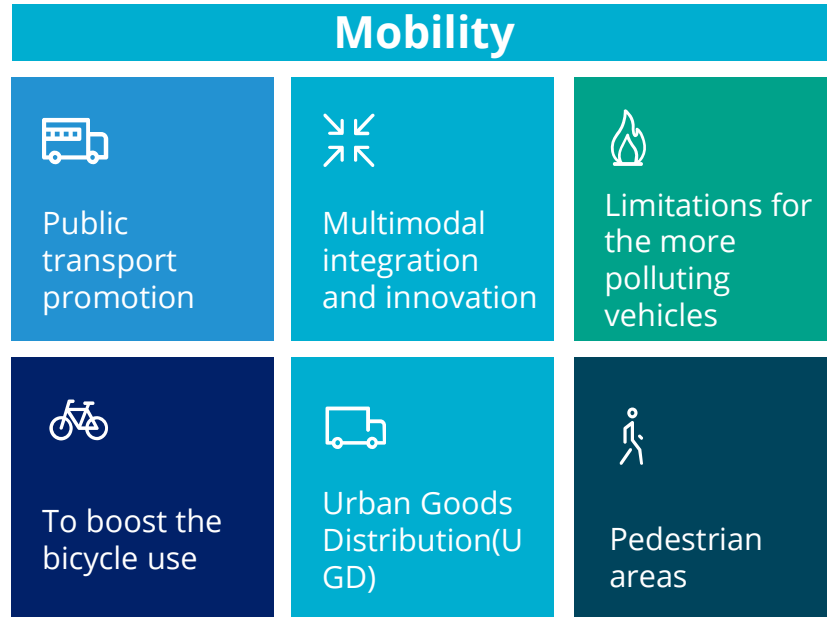


- **Air quality improvement in the city**

Madrid **complies (2022 + 2023)**  
with the **Air Quality European Directive**



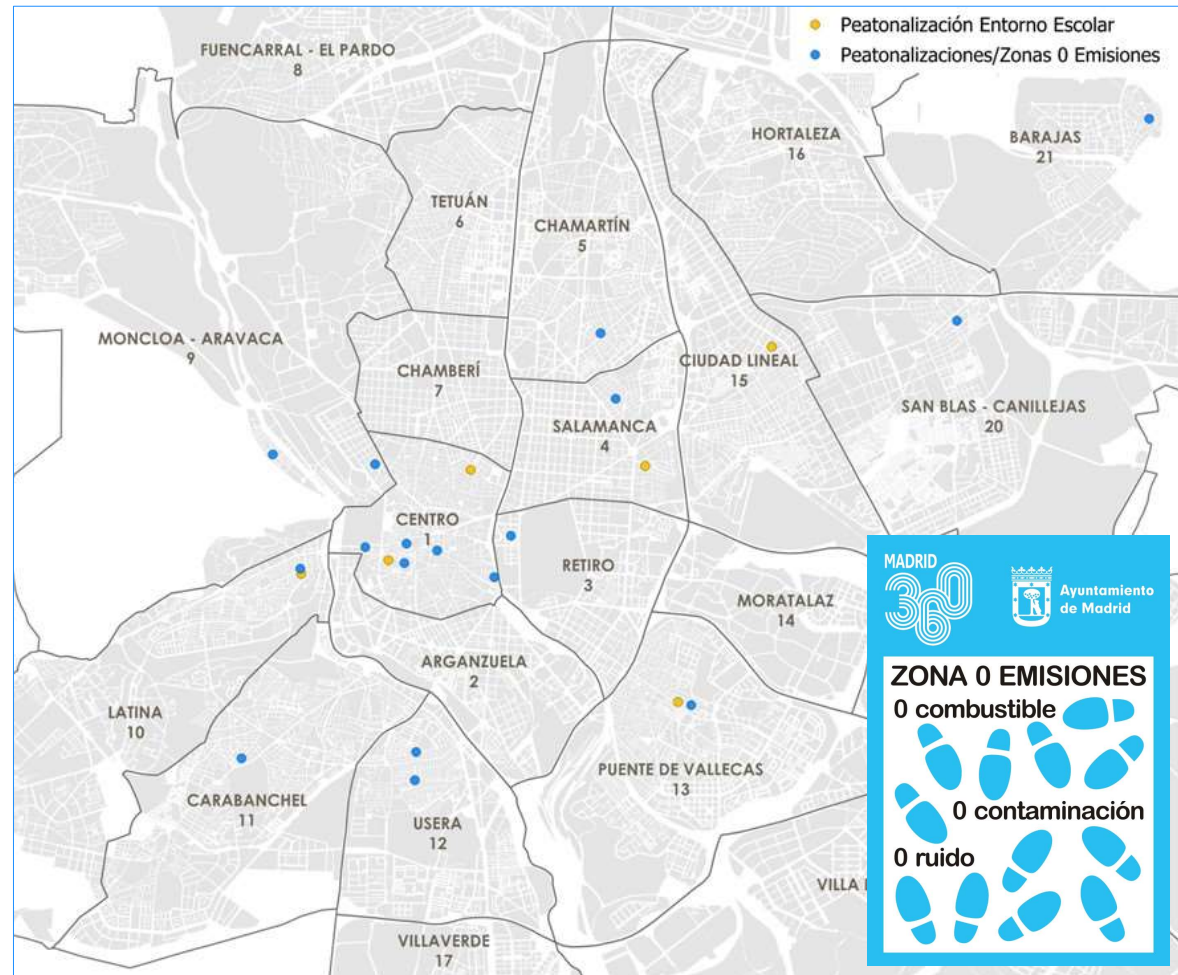
## The Madrid 360 Strategy as a holistic approach to solve present issues...



- an alive strategy, that encompasses **more than 200 initiatives**
- Renewal and improvement of the **regulatory framework**
  - **09/2021: Sustainable Mobility Municipal Ordinance**
  - **07/2022: Sustainable Mobility Plan 360**

## Designing taking into account different criteria such as...

- affected parking according to type
- affected bus lines
- Impact on the cycling network
- alternative routes to give continuity to the circulation network
- green areas generated





...promotes the implementation of  
a Low Emission Zone

### Sustainable Mobility Municipal Ordinance

established the framework

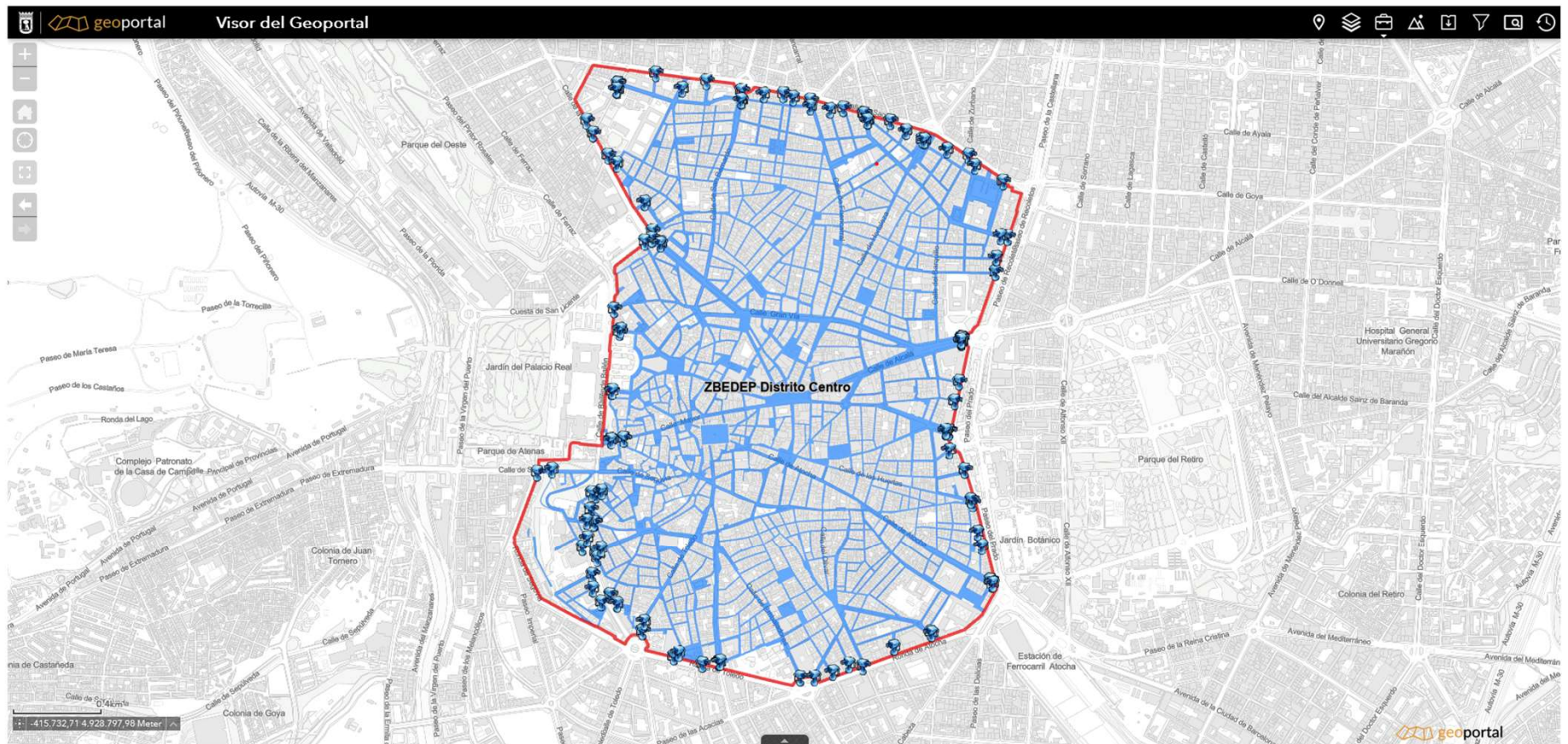
- to transform the entire city of Madrid into a **LEZ** step by step **by 2025**
- for the development of 2 **Special Protection LEZs** in the areas with the lowest air quality



**From the 2025 no petrol vehicles** (registered before 2000) **and diesel vehicles** (registered before 2006) **can circulate within city boundaries**



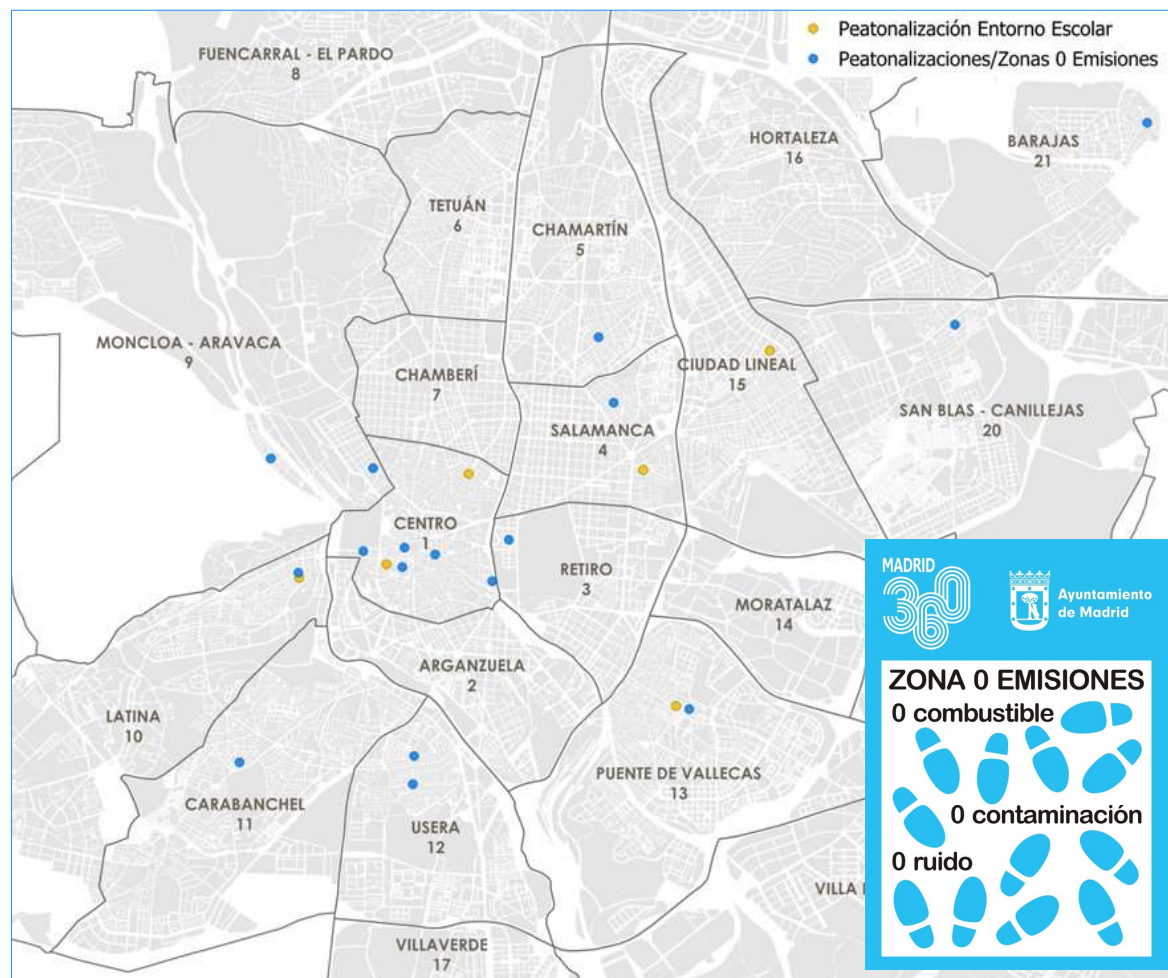
# Madrid is using cameras to control access to the Low Emission Zone





Originally Madrid 360 foresaw the implementation of 1 Zero Emission Zone in every district...

- School zones
- Shopping streets
- Historic quarters





# Madrid Low Emission Zones

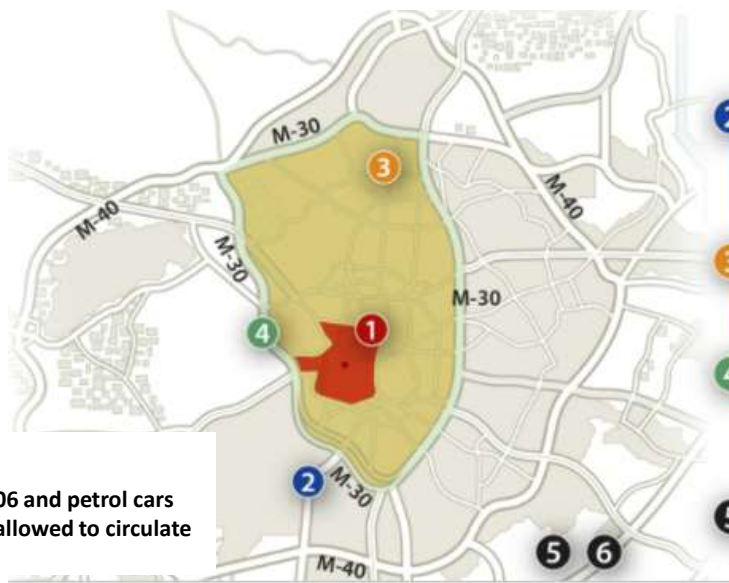
## Encouraging the shift to cleaner vehicles



### Establish driving restrictions for vehicles with no environmental tag (Madrid Low Emission Zones – LEZ)

It is established the regulatory framework for the entire territory of the capital to become a Low Emission Zone (LEZ) progressively from the 1st January 2022.

#### Map of traffic restrictions until 2025



**1 22 September 2021**

- The 15,000 shopkeepers in the central district will have the same access as residents.
- The ban on vehicles with no tag would continue to apply to non-residents in the city centre and B and C vehicles that do not go to car parking.

**2 22 December 2021**

Non-resident vehicles with no tag in Plaza Elíptica square will not be able to pass through the new low emission area (LEZ).

**3 1 January 2022**

Access and circulation forbidden to cars with no tag inside the M-30 ringroad.

**4 1 January 2023**

The ban on cars with no environmental tag also extends the access and circulation on the M-30 ringroad itself.

**5 1 January 2024**

Cars with no environmental tag will not be allowed to drive in the whole municipality except those registered in the city.

**6 1 January 2025**

All diesel cars registered before 2006 and petrol cars registered before 2000 will not be allowed to circulate throughout the capital.

## Environmental Sustainability Strategy – Madrid 360

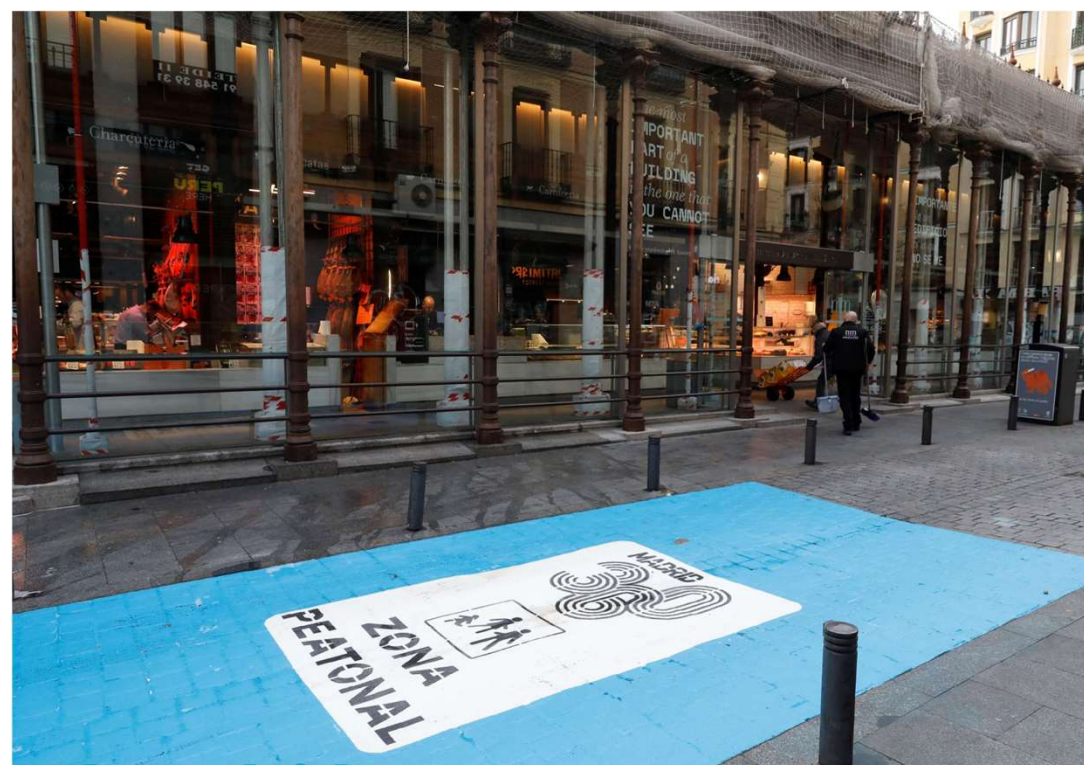


**Low emission zones in Central Madrid**



## Environmental Sustainability Strategy – Madrid 360

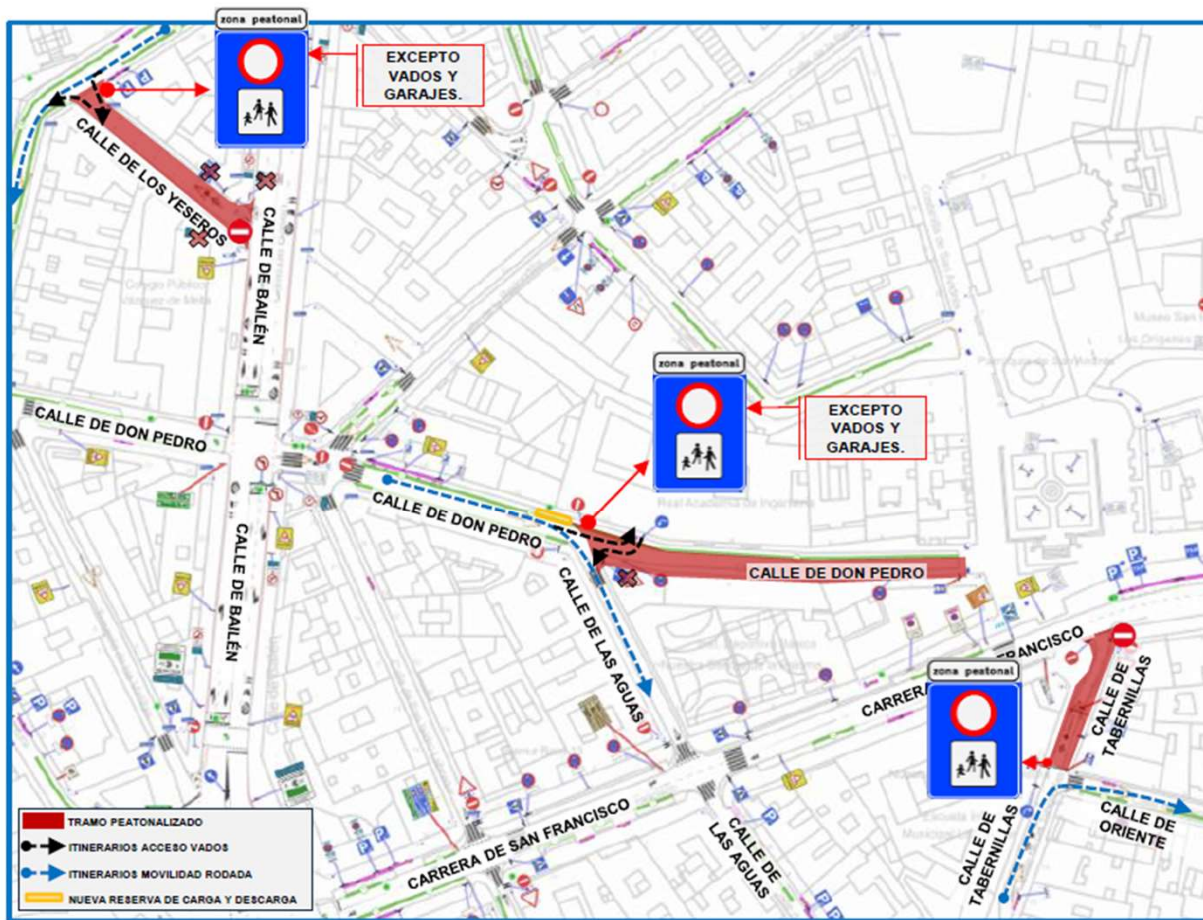
### Mercado de San Miguel



**Low emission zones in Central Madrid**



## School environment Calle de Don Pedro, Plaza de los Carros

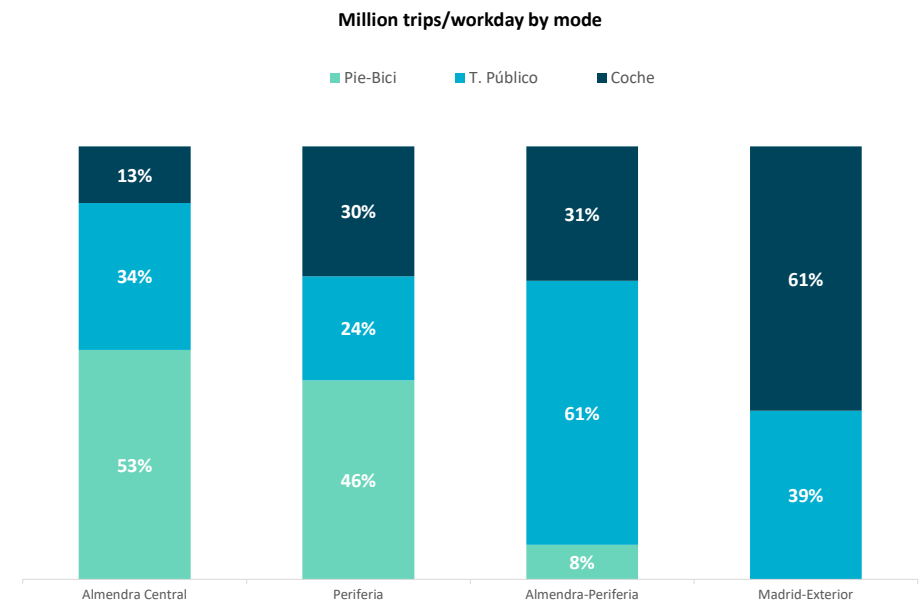




... focussing on the city centre is  
not enough

2019: 3.3 million inhabitants, **2.25 million inhabitants** living in **periphery** (75% of population); society with high **car dependence**.

2030: + **500.000 inhabitants** living in **periphery**; + **1.5 million daily journeys** in periphery.



Modal distribution 2019

# Madrid Unique Projects

## Mobility

### Plaza de Olavide



# Madrid Unique Projects

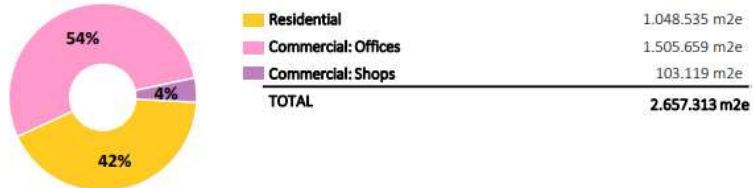
## Mobility

*Madrid Nuevo Norte*

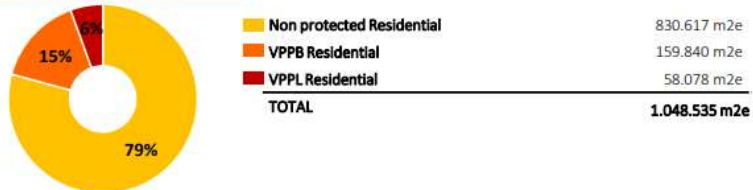
### Land uses



### Buildability



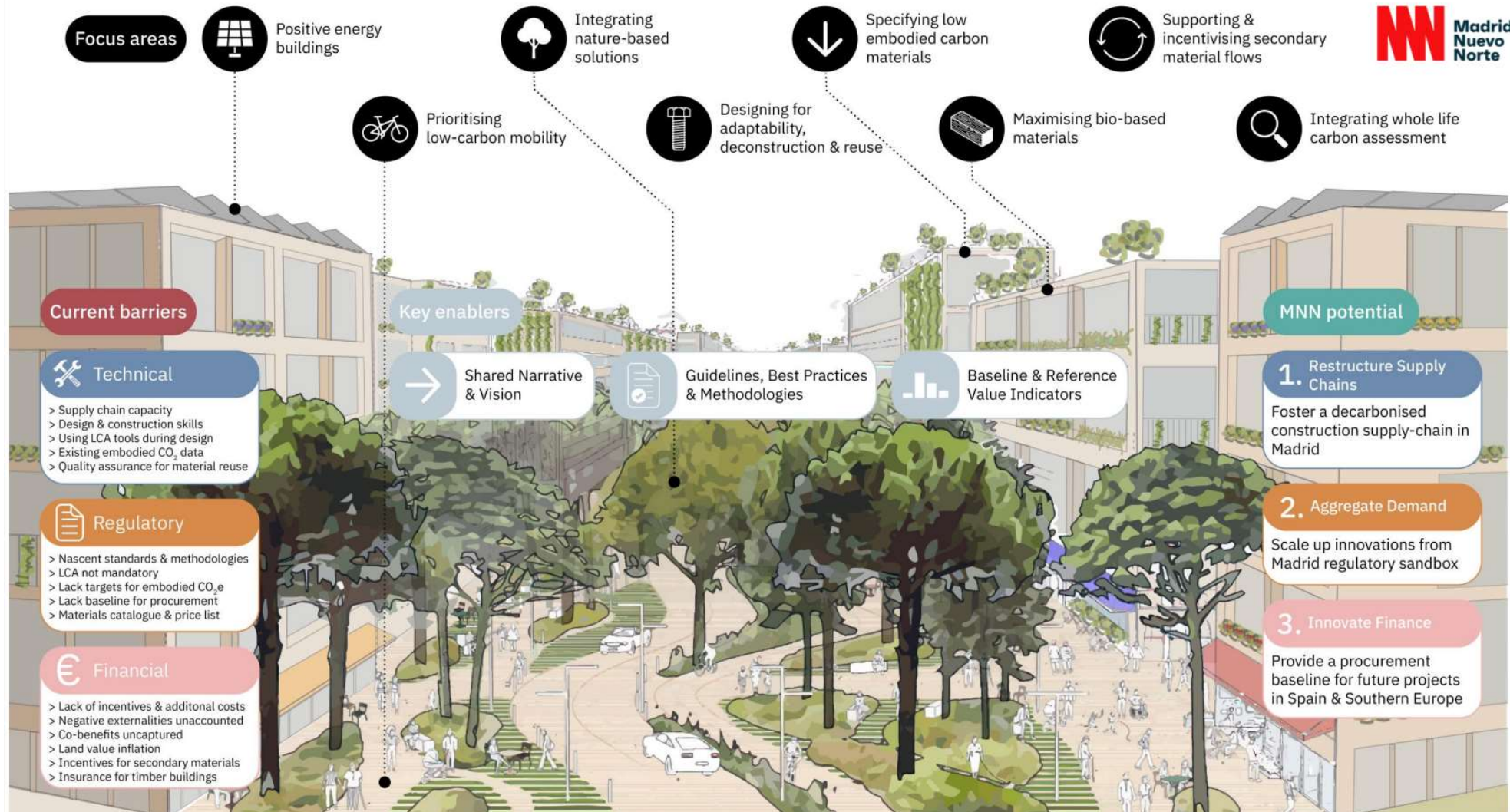
### Residential



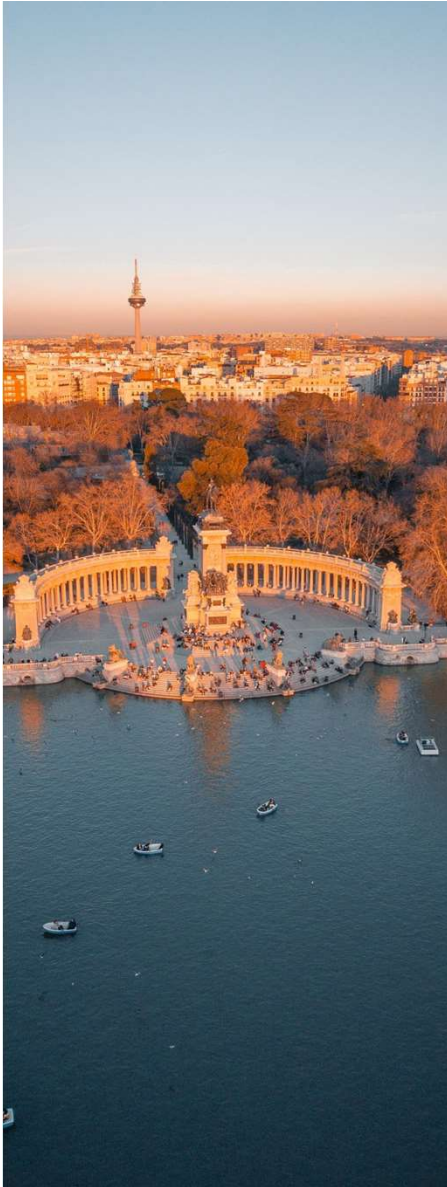


# Madrid Unique Mobility Projects

*Madrid Nuevo Norte*







Thank you for  
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For more information:

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# Helmond SmartZone Buffer Service

Pioneering Intelligent City Access

Nuno Rodrigues, MAPtm

Luuk Misdorn, City of Helmond



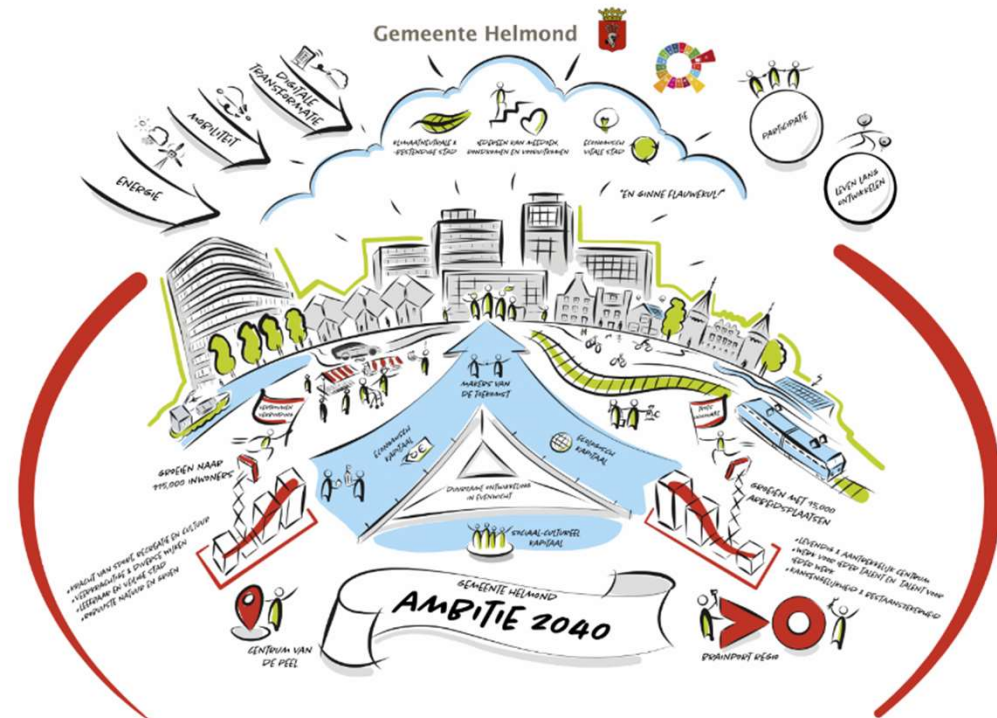
## City of Helmond

- Brainport region, The Netherlands
- 95.000 citizens and will grow with 20%
- Active member in POLIS
- City center will change significantly



## City center developments

- 10.000 new houses
- 10.000 new jobs
- Car free / low traffic zones
- Multi use of public space
- Maybe dynamic triggering (time, environment, event)



Design [www.mindbiz.nl](http://www.mindbiz.nl)

# City center challenges

- Access regulations
  - How to digitize?
  - How to communicate?
  - For inhabitants, visitors or suppliers?
  - How to enforce?
  - How to get insight?
- Do we achieve our goals?







Coding  
the Curbs



EINDHOVEN  
UNIVERSITY OF  
TECHNOLOGY



Gemeente Helmond



Future vision

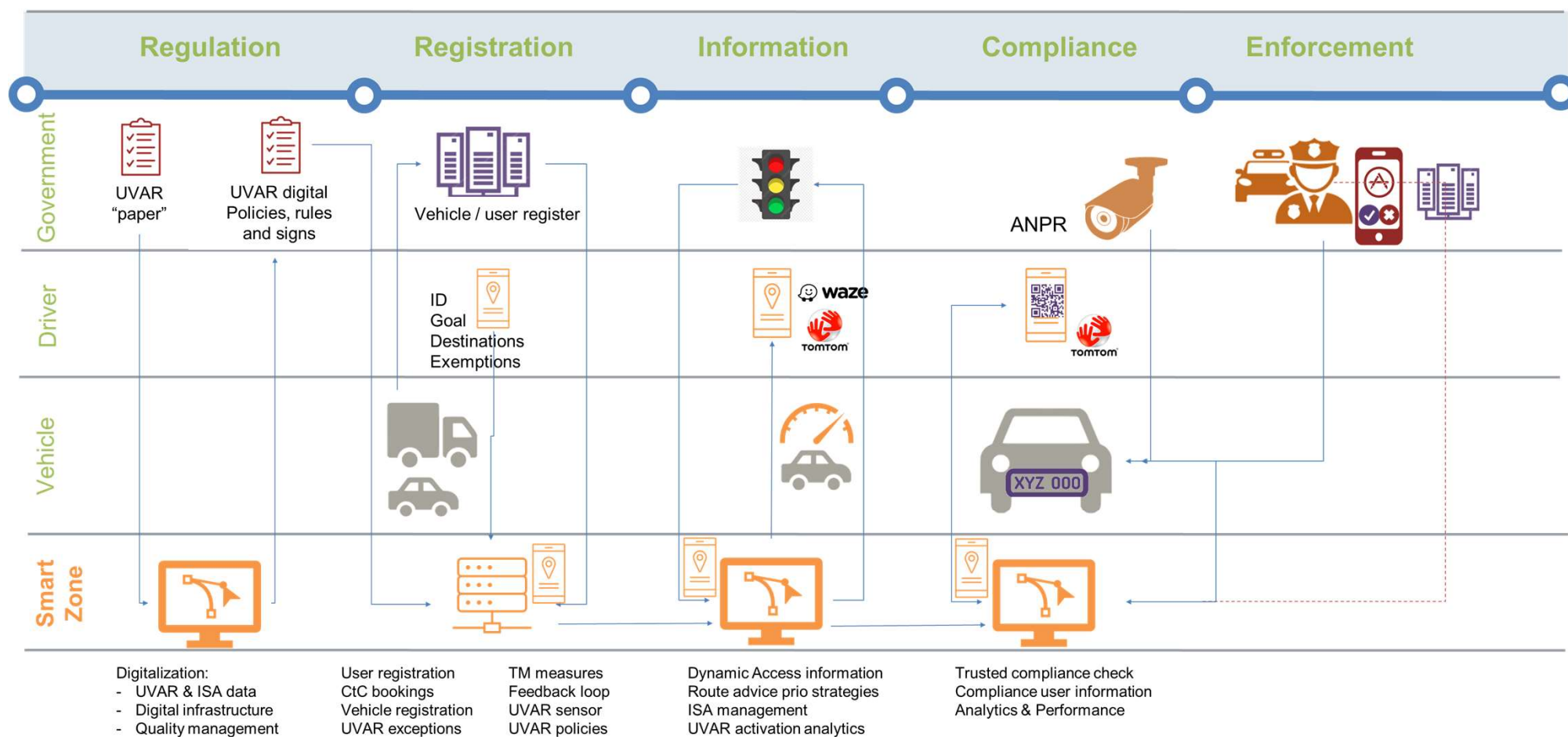
## SmartZone Buffer Concept

As a "Digital city wall".

**SMARTZONE BUFFER "Intelligent City Access" service**  
Monitor and support over who is allowed to get in the wall,  
under the local regulations and conditions - UVAR compliant access



# SmartZone Buffer Digital Services Across UVAR journey



Digital eco-system

# Smart Zone Buffer - Intelligent City Access service

## FOUR FUNCTIONAL VERTICALS :

- **UVAR management:**

*Regulated space based on vehicle and user criteria*

- **Traffic management:**

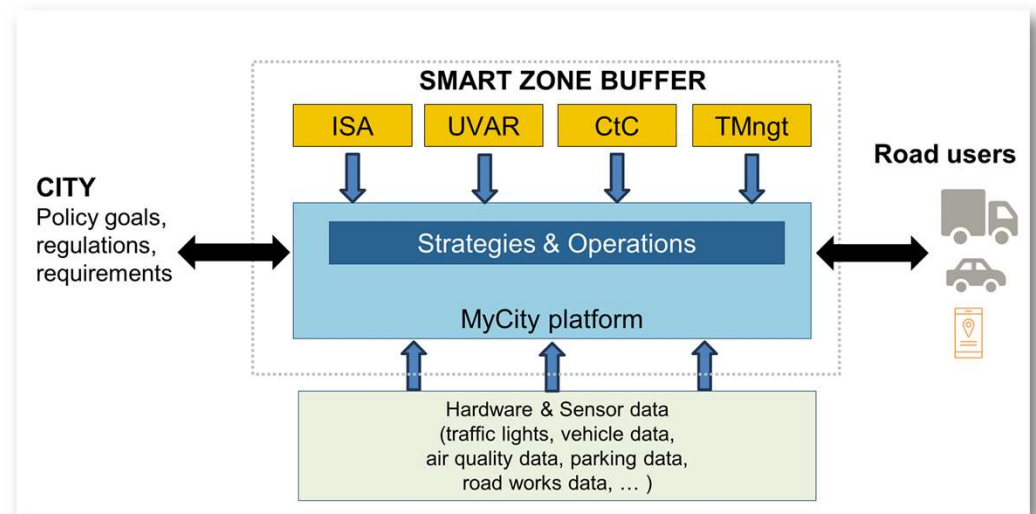
*Management of desirable routes and guidance*

- **Intelligent Speed Adaptation**

*Inform and encourage maximum permitted speed*

- **Coding The Curbs:**

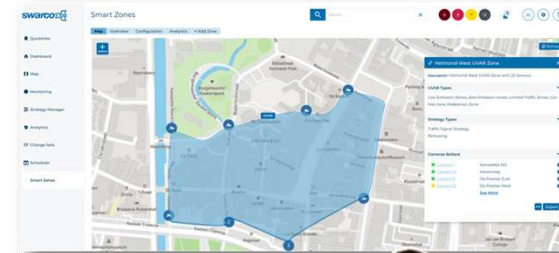
*Digital & bookable (un)loading bays for logistic operators*



# SmartZone Buffer for effective UVAR support

## Digitalization of Regulations

- Real-time updates on UVAR policies and changes.
- Online platforms for transparent regulation management.

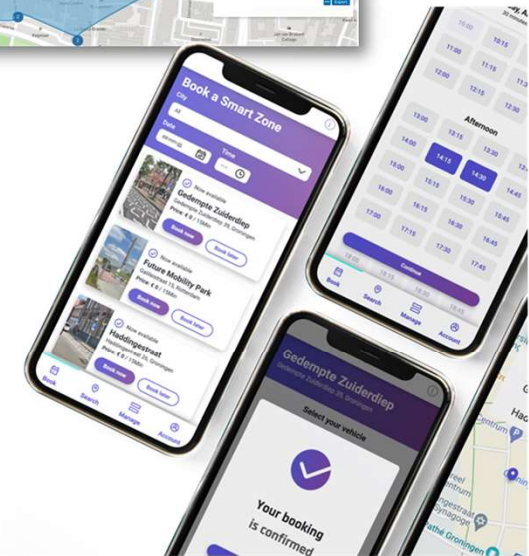


## Digital Access to Vehicle and User Registrations

- User exemptions and booking (loading bays)
- Access to national vehicle and exception registers
- Check and monitor compliance of vehicle and user against regulations

## Route information and Navigation Services

- Integration of UVAR rules into (logistic) transport planning and navigation apps.
- Real-time traffic updates and facilitation of alternative routes.



Thank you for  
your attention!



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# Managing Access: The Local Landscape

09:00 AM - 10:30 AM

27 November 2024

# Managing Access:

Low Traffic Neighbourhoods: A 'war on motorists'?

Peter Jones, Centre for Transport Studies, UCL

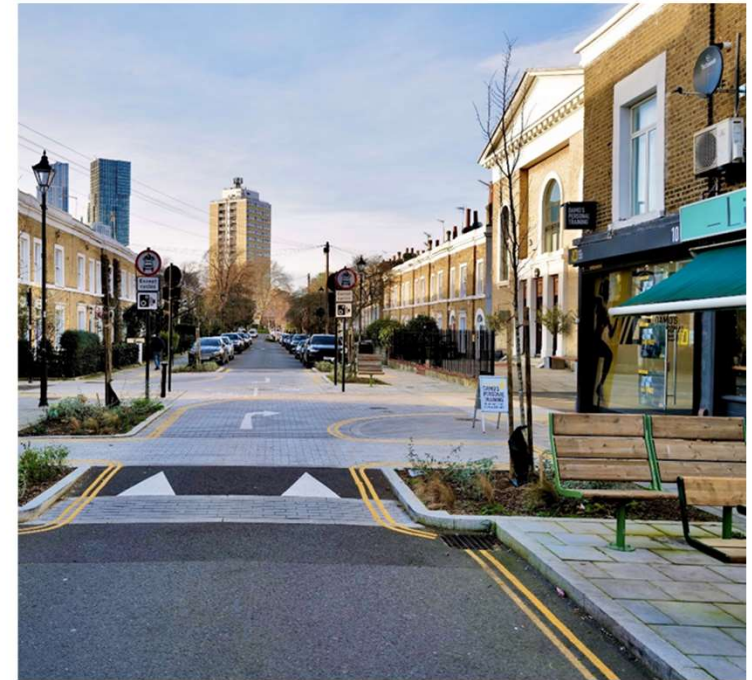
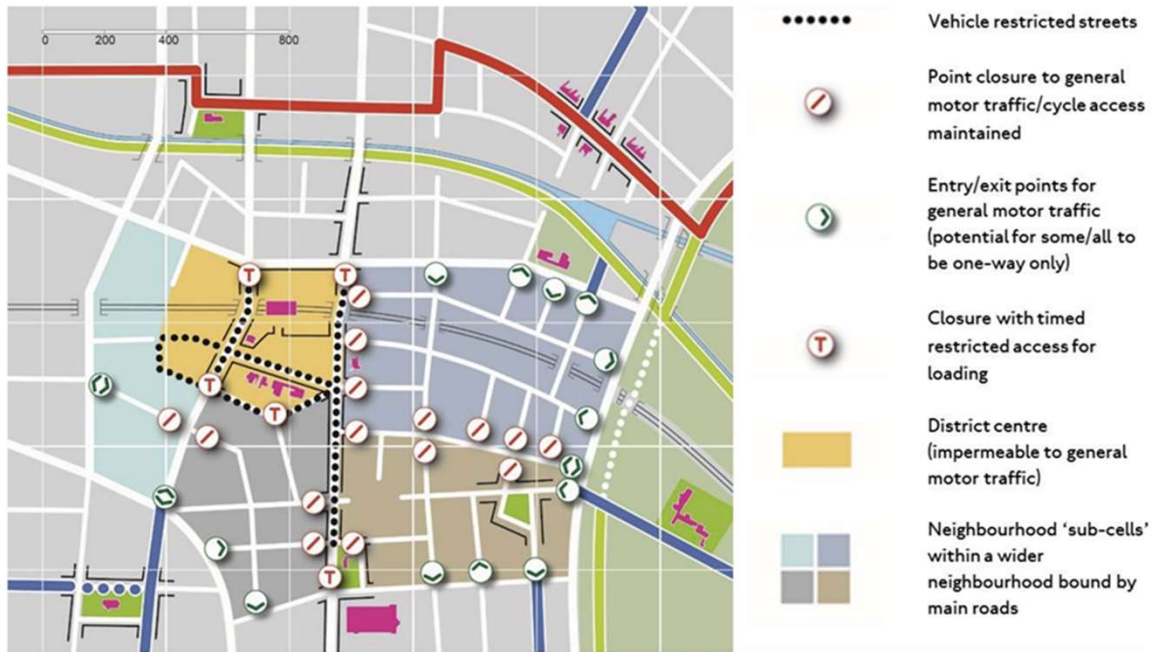
Ahmed Nassif, Centre for Transport Studies, UCL



## Background

- Transport authorities in the UK are under pressure to meet carbon reduction, vision zero and air quality targets
- This is seen to require mode shift, reduction in car travel and roadspace reallocation – a change in the car-priority status quo
- During Covid authorities introduced social distancing measures (e.g. wider footpaths) and lower speed limits – very quickly, with very limited time for design or consultation (often adopting designs proposed by cycling groups)
- At that time, car use declined significantly and walking and cycling increased, making streets much nicer places – residents want to maintain this. So authorities sought to retain and build on this post-Covid, to avoid car use increasing to pre-pandemic levels
- Two of the most common measures were 20mph limits and LTNs (low Traffic Neighbourhoods)

## LTN: principle and practice



Source: Supplementary guidance on Low Traffic Neighbourhoods. See: <https://content.tfl.gov.uk/lsp-app-six-a-supplementary-guidance-ltns-v1.pdf>

# Public backlash

## 20mph speed limits

Default 20mph speed limit in Welsh urban areas, with limited exemptions based on 'Place' considerations:

- 470,000 adults signed petition opposing scheme (over 18% of population over 15)
- Contributed to the resignation of the First Minister and the Transport Minister

**“Seven in ten Welsh people oppose the default 20mph speed limit, with four in ten drivers saying they regularly break it”** YouGov poll, August 2024

- Policy retained, but revised guidance issued, with more of an explicit balance between 'Movement' and 'Place'
- Active review of contentious road sections (very small % of total, but core basis for opposition)

## LTNs




Source: BBC News

- Around 30% removed, due to opposition
- Some politician subject to death threats
- Impact on local council election results
- In some cases retained, despite negative consultation results


## Political respo

- High press coverage over opposition to introducing 20mph limits and LTNs
- Previous Conservative government – pre-election – sought to capitalise on this by being the party championing motorists’ interests – through ‘The Plan for Motorists’
- Main points:
  - *It is not right that some drivers feel under attack*
  - *We will restrain the most aggressively anti-driver traffic management measures*
  - *We will make it clear 20mph speed limits in England must be used appropriately where people want them*
  - Greater focus on local engagement and not overriding local opinion



Department  
for Transport

### The Plan for Drivers



October 2023



## Political respo

- High press coverage over opposition to introducing 20mph limits and LTNs
- Previous Conservative government – pre-election – sought to capitalise on this by being the party championing motorists’ interests – through ‘The Plan for Motorists’
- Main points:
  - *It is not right that some drivers feel under attack*
  - *We will restrain the most aggressively anti-driver traffic management measures*
  - *We will make it clear 20mph speed limits in England must be used appropriately where people want them*
  - Greater focus on local engagement and not overriding local opinion

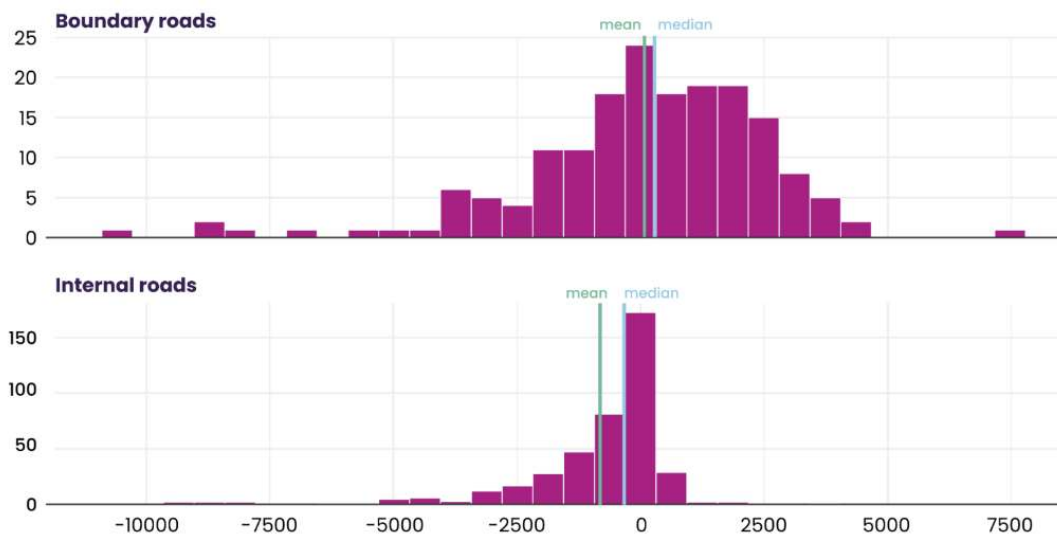


## Assessment

- Stronger protests than historically – because policies actively affect motor vehicle driver behaviour, at a local level
- Positions become very polarised:
  - Walking/cycling vs car
  - Residents vs businesses and general road traffic
- Political decisions based on general principles, rather than local context/evidence
- Strong belief in ‘traffic evaporation’
- Local politicians/officers weight residents’ views more highly than other groups – although they are the ‘highway authority’

## Lack of context-specific evidence

LTN schemes in London: changes in traffic volumes post-implementation, compared to trend values



Findings widely quoted as showing that, on average, traffic on boundary roads have not increased, post implementation.

TRUE, but in half the cases it has – and sometimes substantially

So, context is important

Source: Asa Thomas and Rachel Aldred (2023). 'Changes in motor traffic inside London's LTNs and on boundary roads'. Possible and the Active Travel academy. See: <https://www.wearepossible.org/our-reports/changes-in-motor-traffic-inside-londons-ltns#:~:text=We%20found%20that%20average%20decreases,substantial%20overall%20reduction%20in%20traffic>

# Evaluation framework for LTN impacts

Four dimensions:

**ROLE:**

Resident, business owner/employer, employee, visitor (school child, shopper, delivery driver...), passing through

**MODE:**

Walk, cycle, car/motorcycle, van/HGV, bus, rail

**LOCATION:**

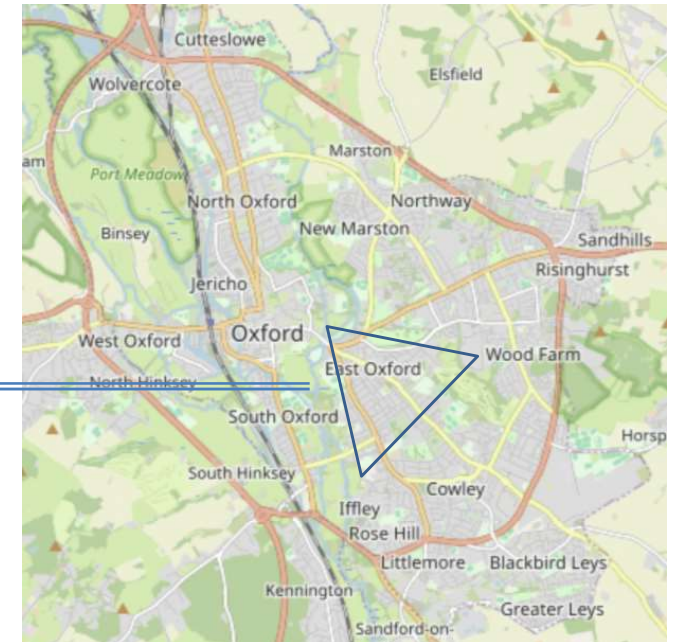
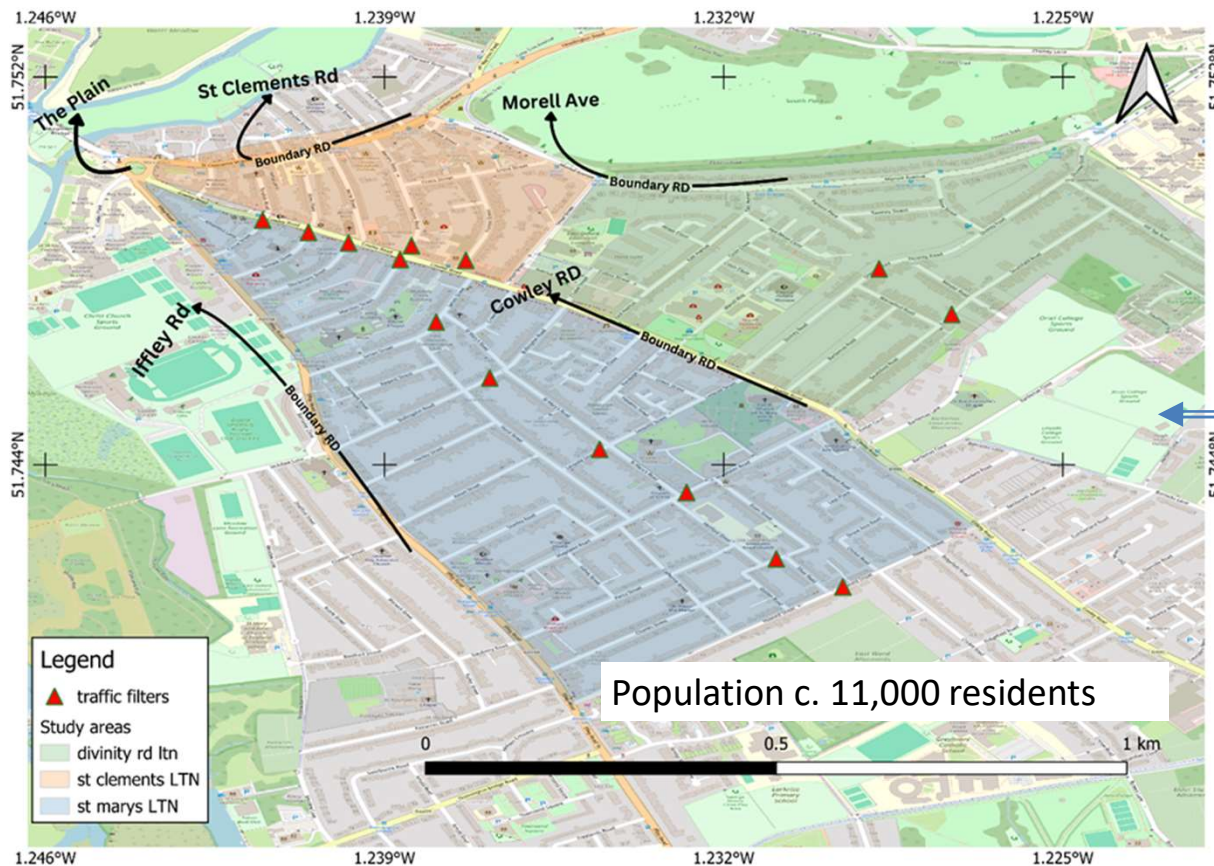
Inside LTN (LEZ, etc), boundary roads, outside LTN

**IMPACT:**

Air and noise quality, carbon emissions, collisions, health (active travel), street crime, traffic delays, business viability



# Case Study: East Oxford LTNs



Source: Open Street Map

One of the most contested LTNs in England – due to limited diversionary road network capacity

## Economic Analysis: available data

Only limited 'before' (2022) and 'after' (2023) data available:

- Traffic volumes (internal LTN and boundary roads)
- Travel times (boundary roads)
- Air quality (internal LTN and boundary roads)
- Traffic collisions (internal LTN and rest of Oxford)
- Business impacts on major shopping boundary road (other shopping radials)

## Summary of Welfare Benefit Analysis (Annualised - £)

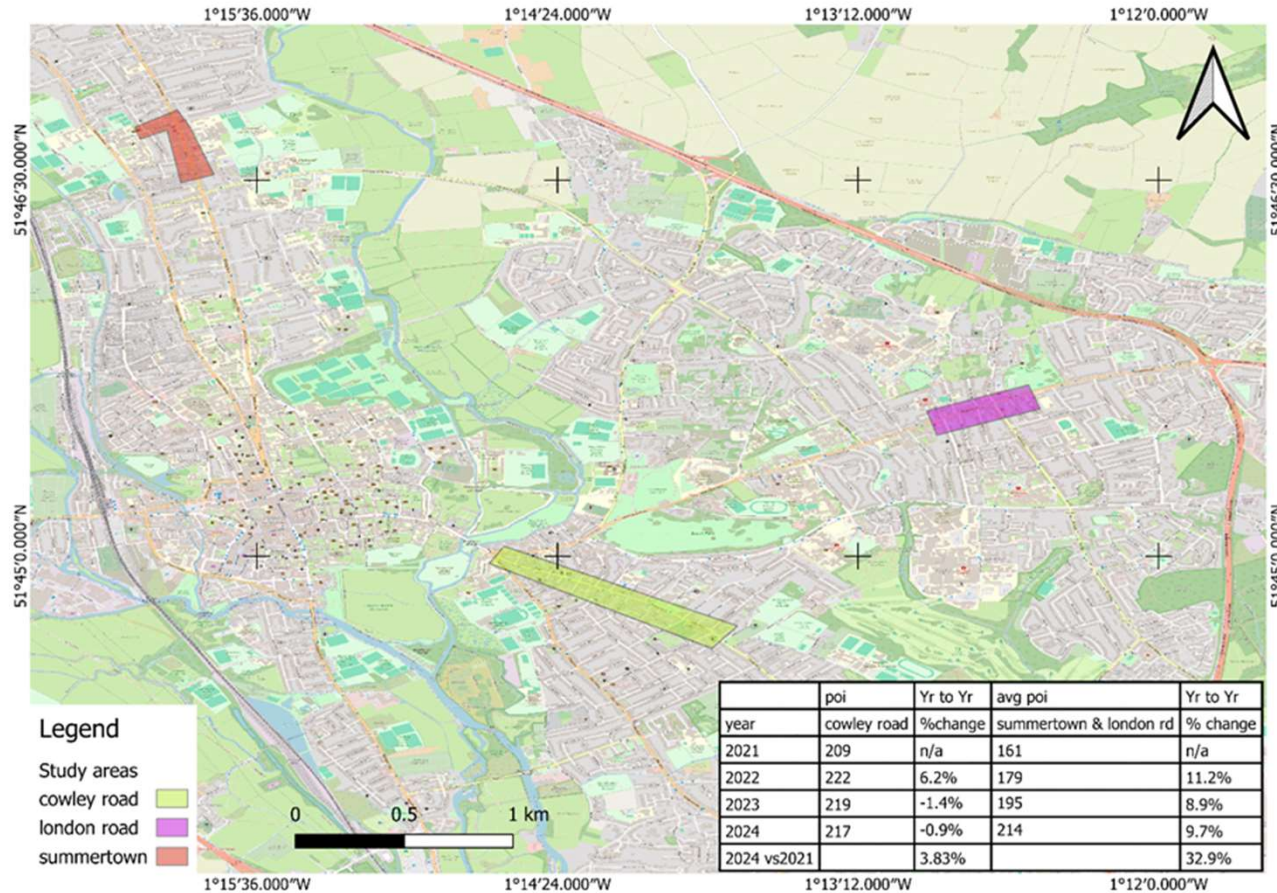
AIR QUALITY	
Inside LTN	96,960
Boundary Roads	-32,618
<b>Net benefit</b>	<b>64,342</b>

JOURNEY TIMES – BOUNDARY ROADS			
AM Peak	Afternoon peak	PM Peak	Evening
-219,087	-297,793	-759,176	-65,829
<b>Net benefit</b>	<b>-1,341,885</b>		

ROAD SAFETY	
Inside LTN	-229,779
Boundary Roads	-197,652
The Plain roundabout	562,854
<b>Net benefit</b>	<b>135,423</b>

NET WELFARE BENEFIT ANALYSIS		
Air Quality	Road Safety	Journey Times
64,342	135,423	-1,341,885
<b>Total net benefit per annum: -1,142,120</b>		

## Business Impacts – ‘Points of Interest’



Points of Interest, as a proxy for number of businesses:

- 2024 vs 2021 shows very small interest on LTN boundary road
- On control high streets, increase nearly 10x greater



## Conclusions - 1

- Most LTNs are highly successful – but not all
- General lack of recognition of context – and that some may not ‘work’, if wider impacts are taken into account
- In some cases (e.g. Waltham Forest), strong opposition from local traders inside the LTN turns to strong support after implementation – but not always
- Primary focus on benefits inside LTNs: often lack of interest in impacts on boundary roads, as worsening traffic congestion will be an incentive to reduce car use – buses and commercial vehicles ‘collateral damage’
- Reports recommend that there should be greater consultation and co-creation of schemes

## Conclusions - 2

- Strong contrast between English government/Treasury priorities – economic growth and congestion reduction – and local authorities prioritising local environmental/health considerations, with relatively little interest in congestion inside urban areas – often seen as a ‘good’ thing
- Politicians/officers often surprised by the extent of public backlash, as a degree of ‘group think’, with little representation of car driver interests
- General view among cycling groups that we should be able to create Dutch levels of cycling in the UK – although nationally cycling reducing and generally higher national car mode share than in the UK
- Suggests we need a more balanced approach, looking at the network as a whole:
  - how much network capacity is needed for ‘essential’ motor traffic?
  - how far can traffic ‘evaporate’?

Thank you for  
your attention!



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Baden-Württemberg  
Ministry of Transport

